24” LED SECURITY MONITOR

LCD

LED-HDMI2406-MA

LED-HDMI2406-PA

User’s Manual

V1.0 01 / 2014

Welcome

Thank you for purchasing the **24” LED VGA Security Monitor**.

This user’s manual is designed to be a reference tool for the installation and operation of the device.

Here you can find information about the corresponding model’s features and functions, as well as detailed instructions on how to operate the device.

Before you operate the device please read the following safeguards and warnings carefully!

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1 General information

1.1 Product description and type of use

The LCD color monitor is designed to be very durable and comes with a hardwearing case structure. It is also ideal for continuous operation and can be used in closed circuit TV systems without risks of excessive operational degradation. The Flat Panel Display has an active matrix, thin-film transistor (TFT), liquid crystal display (LCD).

1.2 General features

- Display area
- Wall mounting (bracket not included)
- Audio input/output sockets
- HDMI video input
- Two composite video input channels (BNC) & one composite video output channels (BNC).
- Wide inclination/viewing angle to allow you to view either from a seated position, when standing up or when moving from one position to the other.
- Multilingual OSD menu for easy setup and optimisation of the display.

1.3 Opening the box

Check that the packing and the contents are not visibly damaged. Contact the retailer immediately if parts are either missing or damaged. Do not attempt to use the device if you do find that there are parts missing or the device is damaged. Send the product back in its original packing, if it is damaged, to the supplier.

1.4 Contents of the box

- LCD monitor
- User's Manual
- Power cord
- 15-pin D-Sub signal cable
- Audio cable (optional)

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2 Warnings

2.1 Power

- Only use the power unit provided to power the device. Check the mains voltage rating before plugging the power unit in.
- Do not pull the cable to unplug the device. Grip the plug end firmly and slowly pull out of the monitor.

2.2 Safety precautions

- Keep the device away from rain and atmospheres with a high humidity, to prevent risk of fire and electrocution. Do not introduce material (either solid or liquid) to the interior of the device. If this should accidentally occur, disconnect the device from the mains IMMEDIATELY and have it inspected by qualified personnel.
- Never open the device. In all cases, contact the qualified personnel or authorised service center for repairs.
- Keep the device away from children, to prevent accidental damage.
- Do not touch the device with wet hands so to prevent electrical shock or mechanical damage.
- Do not use the device if the external casing is damaged from a fall or impact from a heavy/forceful object. There is a risk of electrocution if the device is continued to be used when the casing has been compromised. In all cases, contact the qualified personnel or authorised service center for repairs.
- It is advisable to disconnect the power wire if the monitor is not used for a certain time.

2.3 Installation precautions

- To prevent the device from overheating, locate it in a position where there is an allowance of air flow through the slots in the casing. Ensure at least 5 cm of free space when installing inside a rack. For the same reason, do not install near sources of heat, such as radiators or hot air ducts. Keep away from direct sunlight. Do not install in areas subject to excessive dust, mechanical vibrations or shocks.
- Do not arrange this device on an unstable surface, such as a unbalanced or slanted table. The device could fall causing injury or mechanical failures.
- Do not install the device in a place where it could be exposed to humidity or water. Do not direct a jet of water onto the device: risk of fire, electrocution or even mechanical failure.
- Stop using the device if water or other material should penetrate inside; risk of fire and electrocution. Contact the retailer or authorized installer.
- Slots and openings in the cabinet are provided for ventilation. These openings

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must not be blocked or covered.

- Do not place heavy or heat generating objects on top of the device: this could damage the casing and/or increase internal temperature causing faults.
- Do not cover the device with a cloth while it is running to prevent deforming the external casing and overheating the internal parts. This could raise the risk of fire, electrocution and mechanical failure.
- Keep magnets and magnetised objects away from the device to prevent faults.
- Do not use the device in the presence of smoke, vapor or dust.
- Wait for a while before operating a device immediately after transporting it from a cold place to a warm place and vice versa. Wait on average for three hours: this will allow the device to adapt to the new ambient (temperature, humidity, etc.).
- The monitor is provided with a plastic base and rubber feet. It can be positioned on a horizontal surface, such as a desk or a table. Make sure that the device is fastened firmly and that it is not resting on unstable supports or surfaces.
- Remember to adjust the brightness and contrast to obtain a perfect image.
- The monitor can also be installed on the wall by means of a bracket (not provided).

2.4 Cleaning the device

- Rub delicately with a dry cloth to remove dust and dirt.
- Dip the cloth in neutral detergent if dirt cannot be eliminated with a dry cloth alone.
- Do not use volatile liquids (such a petrol, alcohol, solvents, etc.) or chemically treated clothes to clean the device to prevent deformation, deterioration or scratches to the paint finish.

2.5 Privacy and copyright

- The LCD monitor is a device for CCTV systems. Recording of images is subject to the laws in force in your country. Recording of images that are protected by copyright is forbidden.
- Product users shall be responsible for checking and respecting all local rules and regulations concerning monitoring and recording video signals. The manufacturing SHALL NOT MADE BE LIABLE for use of this product not in compliance with the laws in force.

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3 Hardware setup

3.1 Connecting/Disassembling the stand to the display:

Before setting up the monitor, ensure that the power to the monitor, the computer system, and other attached devices are turned off.

Connecting and disassembling the stand:

1. Place the monitor face down on to a soft cloth.
2. Assemble the Stand Base into the stand body in the correct direction.
3. Turn the Stand Base and lock through by turning it 90° to fix the Stand Base to the Stand Body.
4. Once assembled, lift the monitor up carefully.
5. Turn the Stand Base Lock through 90° to separate the Stand Base from the Stand Body. If you can't release the Stand Base even after the Locking Knob is at the release position then please push the indicated knob down and retry it.
6. Pull out the Stand Base to remove.

IMPORTANT

These connection steps are a general description for a range of monitor models. Stand Base connection may differ slightly from the connection steps.

Do not carry the product upside down, only hold only the stand base and monitor in an upright position. Otherwise the product may fall and become damaged or cause injury.

3.2 Positioning your display

After installation, you can adjust the position of the panel in various ways for maximum comfort. Tilt Range: 5~15 degrees.

(Do not touch or press the screen when adjusting the angle of the monitor).

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It is recommended that in order to maintain an ergonomic and comfortable viewing position, the forward tilt angle of the monitor should not exceed 5 degrees.

3.3 Connecting with the PC

Before setting up the monitor, ensure that the power to the monitor, the computer system, and other attached devices is turned off.

1. Connect signal input cable, audio cable and power cord in order, then tighten the screw of the signal cable.
2. Connect the D-sub (Analog signal) cable.
3. Connect the DVI-D (Digital signal) cable if has DVI-D.
4. Press the power button on the front panel to turn the power on. When monitor power is turned on, the 'Auto' is executed automatically.

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4 Controls & Settings

4.1 Control key board:

1. Menu

2. Up

3. Down

4. Auto

5. Power Button & Indicator

4.2 On Screen Display (OSD) selection and adjustment

What is DCR?

Dynamic Contrast Ratio (DCR) auto adjusts the brightness of the screen so users can see the darker areas of the displayed content in greater depths. By increasing the darkness of the dark areas and the brightness of the bright areas, the contrast ratio is uplifted to 100000:1. DCR value varies subject to the original CR values of the monitor module. The higher the original CR, the higher DCR can be achieved. DCR is great for watching movie or video contents.

How to Use DCR?

Go to the first OSD icon labelled ‘Luminance’, turn on or off DCR as desired. DCR boosts the contrasts between lightness & darkness and enables the viewer to see more layers and details of the picture, especially in the darker areas. Please note when DCR is on, DCB will be disabled.

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DCR Demontrations:

ON **OFF** **ON** **OFF**

4.3 On Screen Display (OSD) control adjustment

Making adjustments to the image size, position and operating parameters of the display is quick and easy with the ‘On Screen Display Control system’. A short example is given below to familiarise you with the use of the controls. The following section is an outline of the available adjustments and selections you can make using the OSD. To make adjustments in the On Screen Display, follow these steps:

1. Press the MENU Button, then the main menu of the OSD appears.
2. To access a control, use the buttons on the monitor. When the icon you want becomes highlighted, press the AUTO/SET Button.
3. Use the / Buttons to adjust the image to the desired level. Use the AUTO/SET Button to select other sub-menu items.
4. Press the MENU button once to return to the main menu and to select another function.
5. Press the MENU button twice to exit from the OSD.

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Main menu	Sub-menu	Description
4:3 IN WIDE		Adjusts the image
PICTURE	BRIGHTNESS CONTRAST GAMMA	Adjust the brightness, contrast and gamma of the screen.
COLOR	PRESET (sRGB / 6500K / 9300K) RED GREEN	To customise the color of the screen.
TRACKING	* HORIZONTAL * VERTICAL	Adjusts the position of the screen.
	* CLOCK * PHASE * SHARPNESS	To improve the clarity and stability of the screen.
SETUP	LANGUAGE) OSD POSITION (HORIZONTAL / VERTICAL * WHITE BALANCE DCR/4;3 IN WIDE FACTORY RESET	To customise the screen status according to the user's operating environment

Listed below are the icons, icon names, and icon, descriptions of the all items shown on the menu. Press the MENU Button, then the main menu of the OSD will appear.

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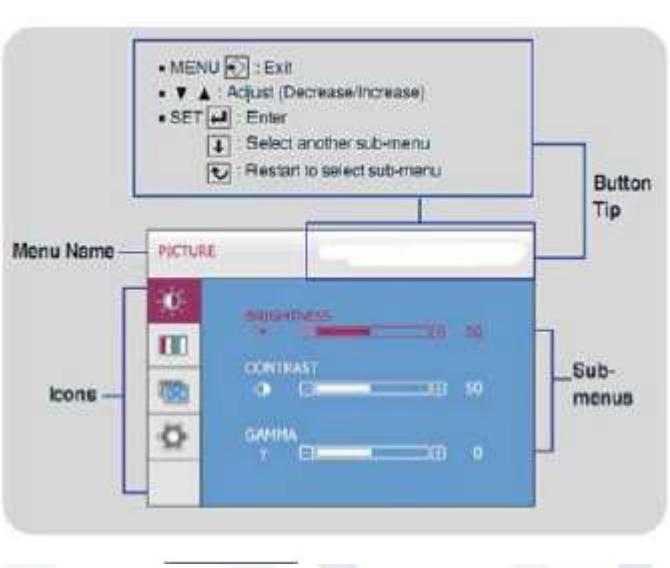

4.3.1 PICTURE

BRIGHTNESS: To adjust the brightness of the screen.

CONTRAST: To adjust the contrast of the screen.

GAMMA: Set your own gamma value. : -50 / 0 / 50

On the monitor, high gamma values display whitish images and low gamma values display blackish images.

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4.3.2 COLOR

PRESET: Select the screen color.

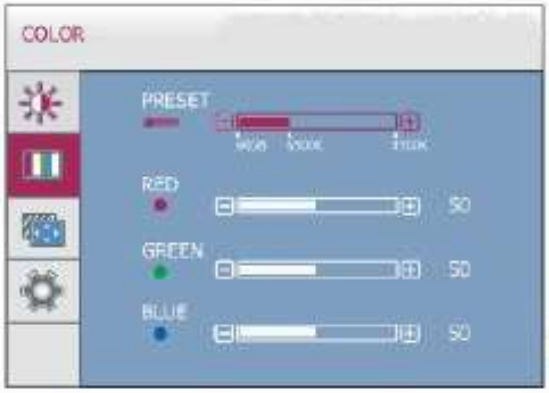
sRGB: Sets the screen color to fit the sRGB standard color specification.

- 6500K: Slightly reddish white
- 9300K: Slightly reddish white

RED: Set your own red color levels.

GREEN: Set your own green color levels.

BLUE: Set your own blue color levels.



4.3.3 TRACKING

HORIZONTAL: To move image left and right..

VERTICAL: To move image up and down

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CLOCK: To minimize any vertical bars or stripes visible on the screen background. The horizontal screen size will also change.

PHASE: To adjust the focus of the display. This item allows you to remove any horizontal noise and clear or sharpen the image of characters.

SHARPNESS: To adjust the clearness of the screen.

4.3.4 SETUP

LANGUAGE: To choose the language in which the control names are displayed.

OSD: To adjust the position of the OSD window on the screen.

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WHITE BALANCE: If the output of the video card is different the required specifications, the color level may deteriorate due to video signal distortion. Using this function, the signal level is adjusted to fit into the standard output level of the video card in order to provide the optimal image. Activate this function when white and black colors are present in the screen.

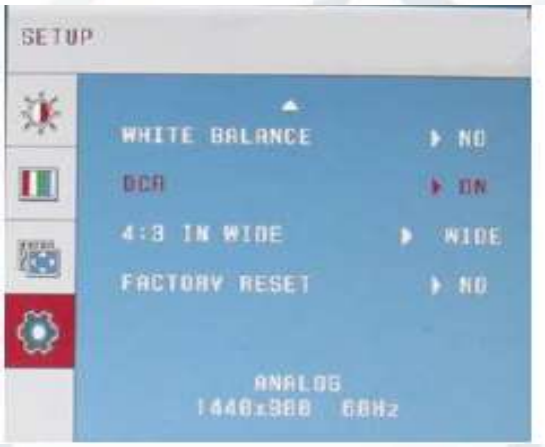
DCR: Open the function of Dynamic Contrast Ratio (DCR) 4:3 IN WIDE. This is to adjust the image size.

FACTORY: Restore all factory default settings except

RESET "LANGUAGE: Press the ▲ ▼ buttons to reset immediately

NOTE:

If this does not improve the screen image, restore the factory default settings. If necessary, execute the WHITE BALANCE function again. This function will be enabled only when the input signal is an Analog signal.



4.3.5 Other functions

Press:【MENU】key to long-term, OSD LOCKED.

Then press:【MENU】key to long-term, OSD UNLOCKED.

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5 Troubleshooting

- **Screen is blank and power indicator is off**

  The monitor is possibly not receiving power. Perform the following steps to fix the problem:

  1. Ensure that the electrical outlet and the monitor are both switched on.
  2. Check that the power cord is firmly plugged into the electrical outlet and the power supply unit.
  3. If the power cord has a removable fuse, replace it.
  4. Try another power cord.
  5. Try another electrical outlet.
  6. Check the power connection at the back of the panel.

- **Screen is blank and power indicator is steady green**

  Brightness and Contrast may be too low. Adjust the brightness and contrast using the On-**screen Display Controls (OSD)** by selecting the button.

- **Screen is blank and power indicator is steady amber**

  The monitor is in the Power Management Standby state. The power management feature is invoked when the computer recognises that you have not used your mouse or keyboard for a user-definable period. Perform the following steps to bring monitor out of the power management state:

  1. Press any key on the keyboard or move the mouse to restore operation.
  2. Check the Power Management software on your computer.
  3. Press the (Input) key to switch between analog and digital mode. If the panel is in the wrong mode for the signal being provided, the monitor will appear to go into sleep mode.

- **Screen is blank and power indicator is flashing green**

  Display mode of the computer is outside the range of the monitor. The display mode the monitor uses is controlled by your computer. Therefore, you should refer to your computer's documentation for details on how to change display modes.

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The image size, position and shape may change when the display mode changes. This is normal and the image can be readjusted using the IMAGE SETUP and the monitor controls.

Note:

Unlike CRT monitors, which require a high refresh rate to minimize flicker, TFT technology is inherently flicker-free. If possible, configure your computer for 1360 x 768 address ability at 60Hz vertical refresh rate.

Use the following table as a guideline and reconfigure your computer to use a supported display mode. The highest resolution (for example, 1360 x 768) produces the optimal output, but limitations of your monitor may prohibit this setting. Adjust the addressability mode until an image appears.

Addressability	Refresh Rate
640 x 480	60 Hz
640 x 480	70 Hz
640 x 480	75 Hz
800 x 600	60 Hz
800 x 600	70 Hz
800 x 600	75 Hz
1024 x 768	60 Hz
1280 x 800	70 Hz
1024 x 768	75 Hz
1280 x 800	60 Hz
1360 x 768	60 Hz
1360 x 768	70 Hz
1360 x 768	75 Hz
1366 x 768	60 Hz
1366 x 768	70 Hz
1366 x 768	75 Hz

- **"No signal" message is shown and power indicator is steady amber.**

  The monitor is not receiving a video signal. Perform the following steps to fix the problem:

  1. Check that the signal cable is firmly connected to your computer.

  2. Check that no pins are bent in the signal cable connector.

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- **Image appears to be smeared**

  There are noises in the video signal. The IMAGE SETUP function is used to adjust the level of noise in the video signal which causes horizontal lines or areas where the image appears to be unstable and jitters or shimmers. This can be done automatically or manually.

Note:

Digital input is not applicable.

1. Select (Menu) in the OSD.
2. Select Manual to adjust CLOCK/PHASE settings.

Auto: If Auto is selected the image will automatically adjust.

Manual: If manual is selected the user will go the manual adjustment screen. This will allow you to remove any horizontal noise and clear or sharpen the image of characters.

- **Image appears to be discolored**

  The color setting may be incorrect. Perform the following steps to adjust the color settings:

1. Select (Menu) from the OSD menu.
2. Select (Color Temp) to adjust the color mode or fine tune the colors using the User menu depending on what you find the most comfortable.

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6 Product Specifications

Display Specification	
Panel Type	24''
Case Type	Plastic / Metal
Best Resolution	1920 (H) x 1080 (V)
Active Display Area	376.32(H) x 301.06 (V) mm
Pixel Pitch	0.294 (H) x 0.294 (V) mm
Contrast Ratio	100,000:1DCR (700:1 Static CR)
Brightness	250 cd/m²
Response Time	3ms (CR>10)
Viewing Angle	170°/160° (CR>10)
Display Colours	16.7 Million
PC Compatible Frequency	30-80KHz(H) / 50-75Hz(V)
Adjustable Colour Temperature	9300K / 6500K / 5800K / User
Video Compatiblity	Multi-Standard for NTSC / PAL
Aspect Ratio	16 : 9
Speaker Multimedia Speakers	Right x 1 Left x 1, 2W
Sound Demodulation	Stereo. Audio
Mute	Yes
Work Humidity	20 % - 70 %
Work Temperature	- 10 to 50 °C
IN/OUT INTERFACE	
Video Interface	VGA x 1 HDMI x 1
Audio Interface	Audio in x 1,Audio Out x 1,

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Power Interface	DC In x 1
Termination	75 Ohms (Automatic termination)
Safety & EMC Certification	Energy Star / CE / FCC / ROHS /WEEE
Stand Type	Desktop
Colour	Black
Button Position	Right Hand Side
Dimensions	Plastic: 568 x 419 x 155mm Metal: 568 x 450 x 234mm
NET/Gross Weight	Plastic: 5.35KG Metal: 6.745KG
POWER	
Power Supply	12VDC, 3 Amp
Voltage	AC100 - 240V 50 / 60Hz
Power Consumption	<110W (Standby Power <1.3W)

IMPORTANT NOTE: Product specifications may be subject to change without prior notice.

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